

Section 1 **MANAGEMENT OF CHANGE (MOC)**

MOC No: 24162	Originator: Fitzgerald, Michael G.	Date Issued: 10/26/2011	Passport No: 343626	EWO No: -143-E1 (TAW# 160)	ABU: D&R	Plant: 4 Crude	Year: 2011
Section 2 Reviewer: Preciado, Silvano E.	MOC Category: S/D	PSM:	MOC Type: Permanent	Expiration Date:	Other Temporary Reason		
Project/Equipment Title: C-1100 Sidecut piping replacement							
Description of Change: Thin locations on the piping C-1100 #4 sidecut to P-1148/A inlet block valves require the piping to be replaced. The thin areas are due to sulfidation corrosion. The thinnest location identified was 0.100" just above the pumps. An isolation valve is being added on the horizontal run of the 12" sidecut piping to perform the proper NDE on the new pipe.							

## MOC will be required if the change will:

- ☐ Cause the use of different feed, chemicals or catalysts?
- ☐ Cause the use of different process conditions, process control, instrumentation, and protective devices or affect upstream/downstream plants?
- ☒ Cause the use of new or modified equipment [which is other than inkind]?
- ☐ Alter equipment siting, building, trailer locations, roads or fire protection?
- ☐ Require modifying existing and/or developing new procedures?

## Section 2

☐ Simultaneously Begin Construction and Start-up

Stage 1	Pre-Implementation	Dept./Person Responsible	Date Complete	Completed By	References
	Design Review	Fitzgerald, Michael G.	11/4/2011	Corson, Andrew S.	
	Process Engineering Review				
	Instrumentation Review				
	Control System Review				
	Utilities Review				
	Environmental/Regulatory Review	Elliott, Brad B.	11/3/2011	Elliott, Brad B.	
	Safety/Regulatory Review				
	Building Permits Review	Linares, Elena E.	11/1/2011	Linares, Elena E.	
	Mechanical Review				
	Inspection Review				
	Metallurgy Review				
	Construction Review				
	Leak Seal Review				
	Relief System Review				
	Infrastructure Review				
	PHA/HSE Review	Wilkerson, Robert M.	11/6/2011	Preciado, Silvano E.	

Authorization to Implement Change (Begin Construction): Approver: Preciado, Silvano E. Date: 11/6/2011

Stage 2	Pre-Startup	Dept./Person Responsible	Date Complete	Completed By	References
	Procedures Review				
	Communication/Training 1	Bessire, John P.	11/7/2011	Bessire, John P.	
	Pre Start-up Safety Review	Wilkerson, Robert M.	11/9/2011	Preciado, Silvano E.	

Authorization to Start-Up Change: Approver: Preciado, Silvano E. Date: 11/9/2011

Extension of Temporary Change Approved By:	Approver:	Expiration Date:	Extention Reason
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Stage 3	Post-Startup	Dept./Person Responsible	Date Complete	Completed By	References
	Communication/Training				
	Process Safety Information	Lewis, John M.			

Change in Place - Reviews, Documentation &amp; Testing Complete

Approver:	Date:
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MOC Cancelled:

Approver:	Date:
Cancellation Reason:	

Note 1: Emergency request for change should be routed by the Approver on the next working day Retain Original in Division for five Years

## DESIGNS REVIEW CHECKLIST

You have been assigned a Design Engineering Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number 24162

Filing Reference

Person Responsible Fitzgerald, Michael G.

Completed by Corson, Andrew S.

Date Completed 11/4/2011

### Project/Equipment Description:

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\*When possible include copies of documents referenced in the summary.

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### ENGINEERING REVIEW

- ☐ BIN Best Practice
- ☒ Civil & Structural
- ☐ Equipment Data Sheet
- ☒ Equipment Specification
- ☐ Fire Protection
- ☐ Hot Tap
- ☒ P&ID's Change due to New / Modified equipment
- ☐ P&ID's Change - Field condition not matching existing P&ID
- ☐ Plot Plan
- ☐ Seismic
- ☐ SIS Update
- ☐ Temporary Leak Repair

### EQUIPMENT REVIEW

- ☒ Columns & Pressure Vessels
- ☐ Compressor, Blowers & Mechanical Equipment
- ☐ Concrete & Steel Structure, Walks and Stair
- ☐ Control Rooms & Building
- ☐ Exchangers, Condensers, Heaters & Cooling Tower
- ☐ Facilities & Siting
- ☐ Foundation
- ☐ Furnaces & Boilers
- ☐ Honeywell
- ☐ Honeywell Process Simulator
- ☐ HVAC
- ☐ Instrumentation
- ☐ Insulation
- ☐ Noise
- ☒ Piping
- ☐ Pumps & Drivers
- ☐ Relief & Venting Systems
- ☐ Sewers, Roads & Miscellaneous
- ☐ Tanks
- ☐ Update Refinery Relief Study
- ☐ Utility Systems

### SUMMARY OF REVIEW\*

Adding 12" gate valve in order to perform the proper NDE on the line. See PSI for marked up P&ID.

\*When possible include copies of documents referenced in the summary.

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□ HVAC

\*When possible include copies of documents referenced in the summary.

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## ENVIRONMENTAL REGULATORY REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number: 24162

Filing Reference:

Person Responsible: Elliott, Brad B.

Completed By: Elliott, Brad B.

Date Completed: 11/3/2011

### Project/Equipment Title:

C-1100 Sidecut piping replacement

#### Check that all Apply:

- ☐ **Chevron:**
- ☐ **Yellow Book**
- ☐ **Correction or Alternations to Refinery Utility System (RI-503)**
- CITY OF RICHMOND**
- ☐ **CEQA (EIR's, etc)**
- ☐ **City of Richmond Conditional Use Permits (Land use and Hazardous Materials)**
- Regulatory**
- ☐ **BAAQMD Air Regulations Permits (including Title V)**
- ☐ **BAAQMD Air Regulations: Additions, modifications, or deletions of VOC Components/Equipment (reg. 8-18 LDAR Program - equipment leaks/fugitive emissions)**
- ☐ **BAAQMD Air Regulations: Wastewater System components - reg 8-8 and NSPS QQQ (process drains, catch basins, manholes, sumps, cleanouts, oil-water separators)**
- ☐ **BAAQMD Air Regulations: Storage Tanks**
- ☐ **BAAQMD Air Regulations: Internal Combustion Engines**
- ☐ **BAAQMD Air Regulations: Flares**
- ☐ **BAAQMD Air Regulations: Boiler, Steam Generators, Process Heaters & Gas Turbines**
- ☐ **BAAQMD Air Regulations: SRU, Tail gas, or H2S Unit Changes**
- ☐ **BAAQMD Air Regulations: Long Wharf (Marine Terminal)**
- ☐ **Department of Transportation (DOT)**

#### SUMMARY OF REVIEW\*

Contact the Air Compliance Inspection Group (ACIG) Supervisor at 2-3239 to arrange a VOC inspection, as well as to have VOC tags placed on any new pumps, valves or connections. Dismantled equipment should have associated VOC tags removed and given to the ACIG to facilitate their removal from the VOC database.

If there will be any additions, deletions, modifications, or other changes to Refinery process wastewater or storm-water system (drains, catch basins, etc.), contact Mark Piersante at 2-2707.

The VOC review is required on this MOC as a result of removing old and/or adding new equipment/lines/connections that have the potential to leak VOCs. This was added so the ACIG (Air Compliance Inspection Group-VOC group) would be aware of changes and their database would remain up to date with those changes. Changes were not always reported to them in the past and were subjecting the refinery to Notice of Violations from the BAAQMD. Contact ACIG Supervisor with any questions.

No other environmental regulatory issues.

\*When possible include copies of documents referenced in the summary.

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## ENVIRONMENTAL REGULATORY REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

MOC Number: 24162

Filing Reference:

Person Responsible: Elliott, Brad B.

Completed By: Elliott, Brad B.

Date Completed: 11/3/2011

### Project/Equipment Title:

C-1100 Sidecut piping replacement

- ☐ EPA Benzene NESHAP (National Emissions Standards for Hazardous Air Pollutants) (process vents, storage tanks, wastewater systems, transfer operations, fugitive emissions)
- ☐ EPA Benzene Waste Operations NESHAP (BWON)
- ☐ EPA MACT (Maximum Achievable Control Technology) Standards and Subparts (process vents, storage tanks, wastewater system, fugitive emissions)
- ☐ EPA NSPS (New Source Performance Standards) and Subparts (storage tanks, flares, wastewater components, fugitive emissions, boilers, process heaters)
- ☐ Chemical Inventory / Hazardous Materials Business Plan (e.g. New Chemicals:RI-313)
- ☐ Risk Management and Prevention Plan (RMPP)
- ☐ RWQCB Waste Discharge Orders, EPA Consent Agreement Sites
- ☐ RWQCB NPDES Regulations/Permits
- ☐ RWQCB SB-1050, Waste Discharge Requirements (WDR)
- ☐ Spill Prevention Control and Counter Measures Plan (SPCC Plan)
- ☐ Waste Regulations and Permit
- ☐ Wharf and Shoreline Permitting related agencies (BCDC, Army Corps, SLC, USCG, OSPR, EPA)
- ☐ Permit to Build and Remove Wells, County Permit Required
- ☐ Activities impacting groundwater protection system (GPS) or WDO sites

Yes No

- ☒ ☐ Any additions, modifications, or deletions of VOC Components/Equipment (including drains or wastewater components) that will change VOC identification/tag

\*When possible include copies of documents referenced in the summary.

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# VOC

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## REG-8, RULE-18 BAAQMD/BACT/MACT/NSPS

This form must be completed for all VOC component/equipment identification requests (additions, modifications, deletions). For additional information, contact the area Environmental Field Coordinator or the Air Compliance Inspection Group Lead Inspector, @2.3239.

Person Responsible Fitzgerald, Michael G.

Completed by Corson, Andrew S.

Date Completed 11/4/2011

### Step 1: Complete the following information

MOC Number: 24162

ABU: D&R

Plant: 4 Crude

Date Of Request: 11/4/2011

Required Completion Date: 1/6/2012

Person Requesting Tagging: Corson, Andrew S.

Requesting Tagging Ext: 2516

Person to Identify Equipment: Corson, Andrew S.

Identify Equipment Ext: 2516

New Equipment: YES

Deletion: NO

Description: An isolation valve is being added on the horizontal run of the 12" sidecut piping to perform the proper NDE on the new pipe. See marked-up P&ID D-308308 (Redlined) attached in PSI Section.

Number:

Process:

Cost Center:

Environmental Field Coordinator Check All Applicable:

BAAQMD ☐ BACT ☐ MACT ☐ NSPS ☐ Other Group

Originator: Fitzgerald, Michael G.

Notified On:

Verified By: Corson, Andrew S.

Verified On: 11/4/2011

Step 2: Obtain a copy of P&ID (or similar drawings) and highlight changes and components in VOC service.

Step 3: Collect all tags that may have already been removed from equipment. Submit tags (if any), drawings and this completed form to the ACIG lead Inspector, @2.3239

## BUILDING PERMITS REVIEW CHECKLIST

You have been assigned a Regulatory Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

### Project/Equipment Title:

C-1100 Sidecut piping replacement

MOC Number 24162

Filing Reference

Person Responsible Linares, Elena E.

Completed By Linares, Elena E.

Date Completed 11/1/2011

### SUMMARY OF REVIEW\*

MOC signed off. A City of Richmond building permit is not required based on the information provided in the scope of work, but is required for any new construction such as: electrical, instrumentation, pipe supports, structural modifications, and etc.

\*When possible include copies of documents referenced in the summary.

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## INSPECTION REVIEW CHECKLIST

You have been assigned a Inspection Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

**MOC Number:** 24162

**Completed On:** 11/1/2011

**Completed By:** Bosworth, Gregory A.

**Person Responsible:** Bosworth, Gregory A.

### Project/Equipment Description:

Thin locations on the piping C-1100 #4 sidecut to P-1148/A inlet block valves require the piping to be replaced. The thin areas are due to sulfidation corrosion. The thinnest location identified was 0.100" just above the pumps. An isolation valve is being added on the horizontal run of the 12" sidecut piping to perform the proper NDE on the new pipe.

Yes	No	Plant Protection/Security Review
<input type="checkbox"/>	<input checked="" type="checkbox"/>	City Fire-Plan Review is Mandato
<input type="checkbox"/>	<input checked="" type="checkbox"/>	City Fire-Permit is Mandato
<input type="checkbox"/>	<input checked="" type="checkbox"/>	City Acceptance Test is Mandato
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Office of Fire Prevention Review On

The scope of work has been reviewed by the Chevron Fire Marshal. Scope of work does not constitute a change in fire protection.

\*When possible include copies of documents referenced in the summary.

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## HEALTH & SAFETY EVALUATION

Date Issued: 10/26/2011

Maximo Number: 343626

MOC Number 24162

ABU: D&R

EWO Number BE-143-E1 (TAW# 1603)

Filing Reference

Plant: 4 Crude

Person Responsible Wilkerson, Robert M.

Section 2 Reviewer: Preciado, Silvano E.

Completed By Preciado, Silvano E.

Project/Equipment Title: C-1100 Sidecut piping replacement

Date Completed 11/6/2011

**Description:** Thin locations on the piping C-1100 #4 sidecut to P-1148/A inlet block valves require the piping to be replaced. The thin areas are due to sulfidation corrosion. The thinnest location identified was 0.100" just above the pumps. An isolation valve is being added on the horizontal run of the 12" sidecut piping to perform the proper NDE on the new pipe.

Step 1: ☐ Notify USW ☐ USW Representation Present **USW Representative:**

Worker's Committee Member/Steward's comments if unable to attend:

☐ Notify Trainer ☐ Trainer Representation Present **Training Representative:**

Step 2: **Involve: Operations, Maintenance, Technical and others with appropriate expertise relevant to the change (CRTC, Contractors, etc)**

Attendees: Cawthorn, Lawrence (lgca); Smith, Bryan D. (BDSB); Preciado, Silvano (SIPR)

Step 3: **Think about the task at hand. Discuss the existing situation. Discuss the change. Discuss the impact of the change on the existing situation. Determine the training requirements for this change.**

Step 4:

Training Type: 1

**Develop a list of concerns, consider your options, consider your following:**

\*H2S \*NH3 \*Acid \*Caustic \*Benzene \*Fall Protection \*Staging \*Scott Air \*PPE \*Hot Work \*Confined Space Entry \*Evacuation Plan \*Safety Operator

Concern

Consequence

Mitigation

Proceed  
Safely

HSE Action Items

Additional Comments

no concerns does not impact normal operations

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\*When possible include copies of documents referenced in the summary.

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## Stage Two Training and Communication Review

8/7/2012 8:33:31 AM

- ☐ Identify the affected employees.
- \* Maintenance and Technical affected?
  - \* Employee who will require training to start up the change based on the level of training.
  - \* Employees who will receive training after the start up
- BUT  
before they can perform work affected by the change
- ☐ Procedures have been modified/written (Ops/SSO/Trainer)
- ☐ Identify the affected employees..
- \* Lesson plan cover sheet (includes training objective statement and list of affected employees)
  - \* Procedural changes (Standing Orders, mark-ups)
  - \* Flow daigrams (final or mark-ups)
- ☐ Determine level of training
- ☐ Training has been scheduled
- ☒ Affected employees have been trained in order to start up the change.

MOC No: 24162

Date Completed: 11/7/2011

Completed By: Bessire, John P.

Person Responsible: Bessire, John P.

Project/Equipment Title:

C-1100 Sidecut piping replacement

Summary of Review:

to be done during 2011 S/D.

## APPENDIX III

### PRE-START-UP SAFETY REVIEW CHECKLIST

You have been assigned a Pre Start-Up Safety Review. This checklist is a guide to help ensure that all information necessary to evaluate the change is considered.

Passport No.: 343626  
EWO No.: BE-143-E1 (TAW# 16032)  
MOC PSSR.: 24162.001

MOC Number 24162  
Filing Reference  
Person Responsible Wilkerson, Robert M.  
Completed By Preciado, Silvano E.  
Date Completed 11/9/2011

#### Project/Equipment Description:

C-1100 Sidecut piping replacement

#### **Subsystem:**

**NOT** The PSSR facilitator shall involve employees with expertise in process operations, maintenance, and engineering, based upon their experience and understanding of the process system being evaluated.

#### **The following requirements for PSSR shall be addressed:**

1. Has the equipment and construction been completed in accordance with the critical design specifications?

Some examples of how this may be accomplished are:

- \* Review of equipment quality assurance and inspection records.
- \* Review of construction inspection records.
- \* P & ID "check" after mechanical completion, and facility "walk-through" inspection.

**Justification:** Job completed per EWO. P&ID updated

#### **Approved by:**

#### **Date**

Corson, Andrew S.

11/9/2011

2. Are Safety, operating, maintenance, and emergency procedures in place and adequate?

- \* The phrase "in place and adequate" means: written, reviewed, approved, and accessible to employees requiring the procedures in their work.
- \* This does not prevent the use of "mark-up" procedures to satisfy the requirement, but these must undergo the same review and approval and training interaction as would "the final version" of the same procedure and would require rigorous control.

**Justification:** yes

Cook, Donald L.

11/8/2011

3. Has the communication or training of affected operating, maintenance, or contract workers been completed?

- \* Maintenance employees, contractors, and other employees whose work is affected by the change must be informed of the change and training in the impact on their job tasks before the changed equipment is started up.

**Justification:** Training has been sent

Smith, Joseph R.

11/9/2011

4. Have the quality assurance goals of mechanical integrity been met?

- \* Ensure that changes are suitable for the intended service.
- \* Ensure that the quality of the work is acceptable.
- \* Ensure that the quality of the Leak Seal is acceptable.

**Justification:** Yes, Signed for Elijah

Smith, Joseph R.

11/9/2011

5. Have all recommendations resulting from PHA's or HSE's been addressed or resolved

- \* Ensure all Recommendations have been documented as addressed or resolved

Preciado, Silvano E.

11/9/2011

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\*When possible include copies of documents referenced in the summary.

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### APPENDIX III

#### PRE-START-UP SAFETY REVIEW CHECKLIST

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Passport No: 343626  
EWO No.: BE-143-E1 (TAW# 16032)  
MOC PSSR.: 24162.001

MOC Number 24162  
Filing Reference  
Person Responsible Wilkerson, Robert M.  
Completed By Preciado, Silvano E.  
Date Completed 11/9/2011

#### Project/Equipment Description:

C-1100 Sidecut piping replacement

#### Subsystem:

Justification: none no changes in operation

Are there any safety-related exceptions encountered during the PSSR that require follow-up after started up? ☐ Yes

#### Miscellaneous Comments:

*Exception*

*Owner*

*Completed  
By*

*Completed  
On*

*Notified*

